

## USING A DISTRIBUTED LEDGER FOR SUBROGATION RECOMMENDATIONS

### CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to (1) U.S. Provisional Application No. 62/555,030, entitled “Using a Blockchain for the Subrogation Claim Process”, and filed Sep. 6, 2017; (2) U.S. Provisional Application No. 62/554,907, entitled “Blockchain-Based Claim Handling”, and filed Sep. 6, 2017; (3) U.S. Provisional Application No. 62/555,358, entitled “Using a Blockchain for the Subrogation Claim Process”, and filed Sep. 7, 2017; and (4) U.S. Provisional Application No. 62/595,823, entitled “Using a Distributed Ledger for Subrogation Recommendations”, and filed Dec. 7, 2017, each of which is hereby incorporated herein by reference in its entirety.

### TECHNICAL FIELD

[0002] Systems and methods are disclosed with respect to using a blockchain for managing the subrogation claim process related to a vehicle collision, in particular, utilizing machine learning generated subrogation resolutions as part of the subrogation process.

### BACKGROUND

[0003] The insurance claim process may involve a tremendous number of communications and interactions between parties involved in the process. Potential parties to the claim process may be insurance companies, repair shops, lawyers, arbitrators, government agencies, hospitals, drivers, and collection/collections agency. Sometimes the costs of repairs may be disputed and parties pursue subrogation for particular charges. As an example, when an insured person suffers a covered loss, an insurer may pay costs to the insured person and pursue subrogation from another party involved in the loss. If an insured vehicle is involved in a collision and suffers a loss, the insurer may compensate the vehicle owner according to an insurance agreement. If, for example, the vehicle owner was not at fault in the collision, the insurer may pursue damages from another party, such as the insurer of the party who was at fault in the collision. An insurance agreement may include an obligation of an insured to assign the insured's claim against a party at fault to the insurer, who may then collect on the claim on the insured's behalf.

[0004] Settling a subrogation payment may be a lengthy, complicated process. The various parties (e.g., parties at fault in a vehicle collision, owners of the vehicles, insurers, etc.) may need to exchange information relating to the collision to determine which party was at fault. Sources of information relevant to a fault information and/or subrogation payment may include information regarding parties involved in a loss, forensic data regarding the loss, vehicle data regarding a loss, etc. The various parties may verify and share information from a variety of sources including information held by parties involved in a loss and their insurers, and information obtained from third parties (e.g., governmental entities, independent contractors, etc.).

[0005] The parties to a subrogation payment (e.g., insurers) may make proposals to one another to settle the subrogation claim. A proposal may include an accounting of damages, such as the costs to a vehicle owner whose vehicle

was damaged. If an insured person suffered an injury in a collision, the injured person's health care costs may be included in the accounting of damages. One or both of the parties to a subrogation claim may rely on independent third parties to assess costs, such as a repair cost estimate by an authorized automotive repair services provider for damage incurred in a collision. To settle the subrogation claim, the parties may indicate acceptance or approval of damages calculations and a payment amount that is agreed between the parties to settle the claim. Parties may rely on a third-party intermediary to handle subrogation negotiations and resolution (e.g., validate information relating to a loss and facilitating communications between the insurers) at added expense.

### BRIEF SUMMARY

[0006] Systems and methods are disclosed for utilizing a distributed ledger, or blockchain, to manage an insurance claim process, in particular, a subrogation claim process. The systems and methods disclose using evidence oracles for inputting information into the blockchain, utilizing machine learning to suggest amounts for the subrogation process, a line item dispute mechanism, and creating/managing a distributed ledger in response to a vehicle being in an collision. The methods and systems make use of secure transactions and smart contracts stored on the blockchain.

[0007] The present embodiments further relate to insurance and handling insurance claims. Sensor, image, or other data may be collected from various sources, such as mobile devices, one or more vehicles (such as smart or autonomous vehicles), smart infrastructure, satellites, drones, and/or smart or interconnected homes. The data collected may be analyzed by artificial intelligence or machine learning algorithms to identify whether a vehicle collision occurred; determine a percentage of fault (for the drivers or autonomous vehicles); determine the veracity of an insurance claim or identify potential fraud or buildup; facilitate subrogation or arbitration processes; determine and assign liability to vehicle manufacturers or drivers; create new blockchains and/or individual blocks for blockchains associated with a particular insurance claim, individual, or vehicle; provide payments or e-payments among parties; and/or facilitate other functionality discussed herein.

[0008] In one aspect, computer-implemented method for interacting with a distributed ledger maintained by a plurality of participants to generate and transmit subrogation amounts may be provided. The method may include: (1) monitoring, at one or more processors, transactions on the distributed ledger; (2) identifying, at the one or more processors, a transaction related to a subrogation claim; (3) analyzing, at the one or more processors, the transaction related to the subrogation claim; (4) generating, at the one or more processors, a recommended subrogation resolution using a machine learning algorithm; and/or (5) transmitting, at the one or more processors, a transaction including the recommended subrogation resolution to a smart contract stored on the distributed ledger. The method may include additional, less, or alternate actions, including those discussed elsewhere herein.

[0009] In another aspect, computer-implemented method for interacting with a distributed ledger maintained by a plurality of participants to generate and transmit subrogation amounts may be provided. The method may include: (1) receiving, at the one or more processors, a transaction